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Archeological Investigations for Tasks 7 and 8 of the Proposed Center Point Wastewater Facilities Improvements Project, Center Point, Kerr County, Texas

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Blanton & Associates, Inc.
ENVIRONMENTAL CONSULTING • PLANNING • PROJECT MANAGEMENT

ARCHEOLOGICAL INVESTIGATIONS FOR TASKS 7 AND 8 OF THE PROPOSED CENTER POINT WASTEWATER FACILITIES IMPROVEMENTS PROJECT, CENTER POINT, KERR COUNTY, TEXAS

by
Jon J. Dowling

Texas Antiquities Permit No. 7178
Principal Investigator:
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October 2015

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Archeological Investigations for Tasks 7 and 8 of the Proposed Center Point Wastewater Facilities Improvements Project, Center Point, Kerr County, Texas

By
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Prepared for

Tetra Tech, Inc.

and

Kerr County

Texas Antiquities Permit No. 7178
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ABSTRACT

Between February 25 and 26, 2014, Blanton & Associates (B&A), under contract with Tetra Tech, Inc., the prime contractor to Kerr County, carried out an intensive archeological survey (as per 13 TAC 26.7 and 26.15) of localities associated with Tasks 7 and 8 of the proposed Center Point Wastewater Facilities Improvements Project in Center Point, Kerr County, Texas. The Center Point Wastewater Facilities Improvements Project is situated within and around Center Point, located approximately seven miles (11.2 kilometers [km]) southwest of Comfort in Kerr County, Texas. Task 7 consists of a portion of the proposed wastewater line that crosses Wilson Creek between Greenwood Drive and Schladoer Lane. Task 8 consists of two localities targeted for wastewater line improvements at Avenue D and Mosty Lane, and between Nicks Road and Nicks Road, between Center Point and Comfort.

Both Task 7 and 8 portions of the Center Point Wastewater Facilities Improvements Project were subject to intensive archeological survey. A total of 13 shovel tests and two backhoe trenches were excavated, and no significant archeological deposits were encountered nor were any archeological sites recorded.

No artifacts were collected during this survey. Archeological investigations were carried out under Texas Antiquities Permit No. 7178.

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INTRODUCTION

This document presents the results of an intensive archeological survey conducted by Blanton & Associates, Inc. (B&A) between February 25 and 26, 2015, under contract with Tetra Tech, Inc., the prime contractor to Kerr County, on behalf of Kerr County prior to construction of Tasks 7 and 8 for the proposed Center Point Wastewater Facilities Improvements Project. The proposed Center Point Wastewater Facilities Improvements Project is situated within and around Center Point, located approximately seven miles (11.2 kilometers [km]) southwest of Comfort in southeast Kerr County Texas (**Figure 1**), and is featured on the Comfort, Texas US Geological Survey 7.5-minute topographic quadrangle map (**Figure 2**).

Tasks 7 and 8 are part of the Kerr County Commissioner's proposal to provide wastewater collection and treatment improvements for the community of Center Point in Kerr County, Texas. The Center Point Wastewater Facilities Improvements Project has undergone several alterations that include additions to the originally proposed wastewater system alignment investigated by B&A between 2010 and 2013. Five separate tasks (nos. 7 through 11) have been defined for proposed alterations, with various tasks treated as standalone projects.

Task 7 consists of a portion of the proposed wastewater line that crosses Wilson Creek between Greenwood Drive and Schladoer Lane, approximately 0.78 mile (1.25 km) due north of State Highway 27 (SH 27). Task 8 consists of two localities targeted for wastewater line improvements. The Avenue D and Mosty Lane portion of Task 8 is situated between Avenue D and Mosty Lane, 0.24 mile (0.39 km) south of 2nd Street in a residential area southeast of Center Point proper. The Nicks Road portion of Task 8 is situated between Nicks Road and Nicks Road North 0.12 mile (0.20 km) north of SH 27, between Center Point and Comfort.

The archeological investigations carried out for Tasks 7 and 8 consisted of intensive archeological survey subject to the provisions of the Antiquities Code of Texas (ACT), as it involves "lands owned or controlled by Texas or any city (e.g., Kerr County and City of Comfort), county, or local municipality thereof." The provisions of the ACT, now subsumed in Title 13, Part II Chapter 26 of the Texas Administrative Code, require that any political subdivision of the State of Texas must identify potential State Antiquities Landmarks (SALs) through survey of public lands prior to actions that could potentially damage those SALs. The purpose of the survey was to identify and describe all archeological remains discovered within the project area, evaluate their eligibility for formal State Antiquities landmark (SAL) designation or for inclusion to the National Register of Historic Places (NRHP), and should eligible archeological remains be located, make recommendations for future management options such as avoidance, preservation, or further investigations.

Fieldwork was conducted in accordance with the standards and guidelines of the Texas Historical Commission and the Council of Texas Archeologists under Principal Investigator Jon J. Dowling.

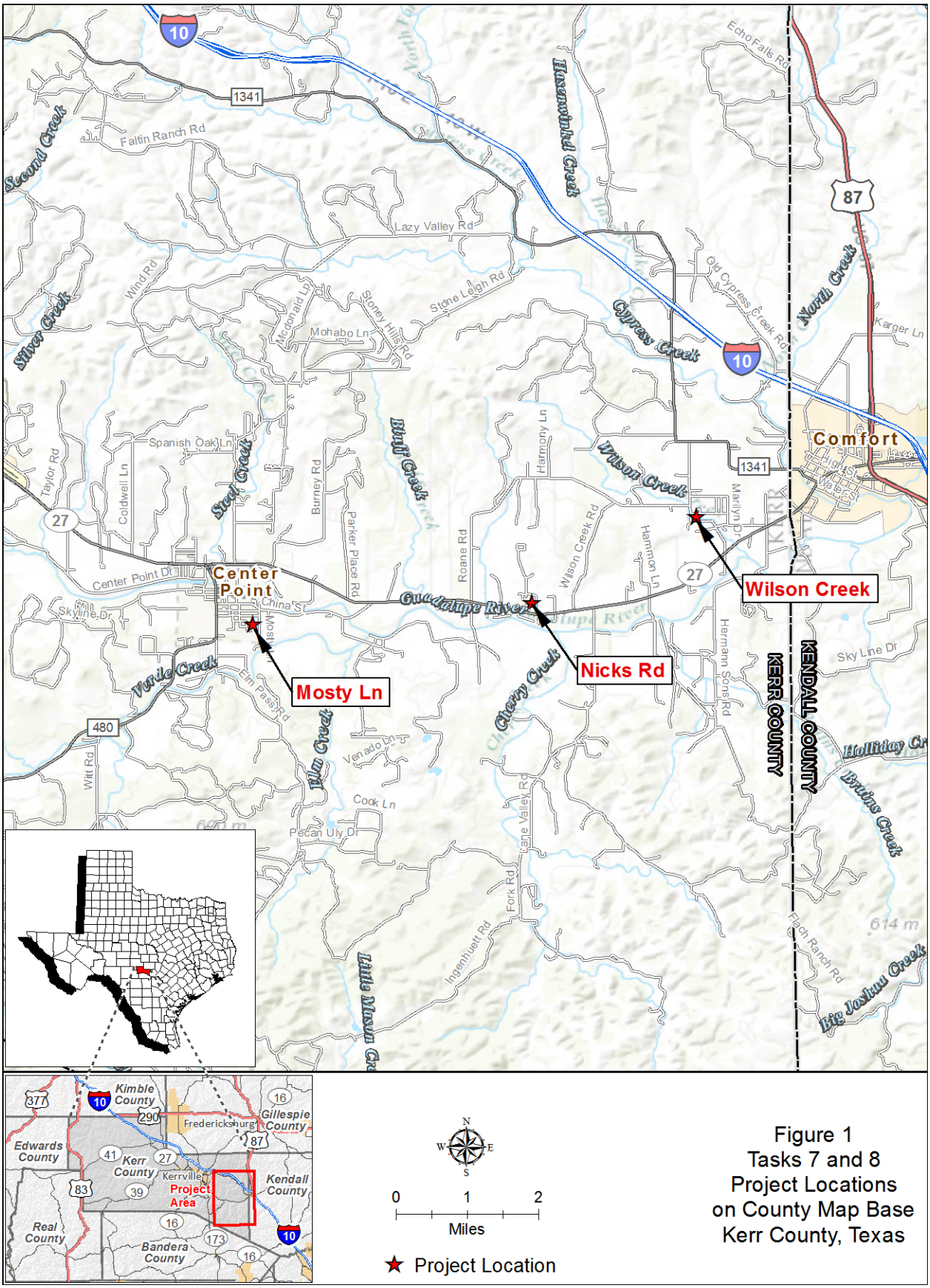

Figure 1
Tasks 7 and 8
Project Locations
on County Map Base
Kerr County, Texas

Figure 2
Tasks 7 and 8
Project Locations
on Topographic Map Base
Kerr County, Texas
Project Location
0
1
2
Miles
0
1
2
Kilometers
Wilson Creek
Nicks Rd
Mosty Ln
Center Point
Marilyn Dr
Hermann Sons Rd
Hammon Ln
Wilson Creek Rd
Upper Dietert Rd
Harmony Ln
Cherry Creek
Roane Rd
Bluff Creek
Parker Place Rd
Center Point Rd
Burney Rd
Redbird Ln
Guadalupe River
China St
Verde Creek
Elm Pass Rd
Spanish Oak Ln
Steel Creek
Center Point Dr
1341
27
480

ENVIRONMENTAL SETTING

The project area is located in Central Texas near an area where the Blackland Prairie and the Edwards Plateau converge, creating a mosaic of vegetation communities (Gould 1969). An ecotone such as this in a prehistoric setting would increase biotic resource variability, making it an attractive locale to hunter-gatherers. The Edwards Plateau falls under the Juniper-Oak-Mesquite Savanna vegetative region (Black 1989) and the Edwards Plateau vegetative region as defined by Gould (1969). Representative photos of the Tasks 7 and 8 project areas are depicted in **Figures 3**, **4**, and **5**.

Geology

The geological formation around the project area is Austin Chalk (Kau) composed of chalk and marl formed during the upper Cretaceous Period. Raw material (Edwards Chert) for prehistoric tool production is common in this area. These materials arrived in reverse superposition atop younger Upper Cretaceous rocks by having been elevated, eroded, and redeposited. The Edwards Plateau is a major natural region that covers approximately 24 million acres in the central portion of the state. The bedrock geology of the Edwards Plateau is predominantly comprised of hard, resistant, Cretaceous-aged limestone and dolomites originating from various geologic groups (e.g., Trinity, Woodbine, Glen Rose, Walnut, Edwards, and Fredericksburg). Having been exposed to the elements for millions of years, the landscape of the Edwards Plateau shows signs of extensive weathering.

Soils

According to the United States Department of Agriculture (USDA) Soil Conservation Service, approximately 90% of the soils within the Task 7 project area include Oakalla silty clay loam, occasionally flooded. A typical profile consists of 0-60 inches of silty clay loam. The parent material is residuum weathered from limestone.

Soils within the Avenue D and Mosty Lane portion of the Task 8 project area include Barbarosa silty clay loam, 0 to 1 percent slopes. A typical Barbarosa silty clay loam profile consists of 0-12 inches of silty clay loam, overlying 12-65 inches of clay. The parent material is mixed sources of alluvium. Soils within the Nicks Road portion of the Task 8 project area include Barbarosa silty clay loam, 0 to 1 percent slopes, as well as Nuvalde silty clay, 0 to 1 percent slopes. A typical Barbarosa silty clay loam profile consists of 0-12 inches of silty clay loam, overlying 12-65 inches of clay. The parent material is mixed sources of alluvium. A typical Nuvalde silty clay profile consists of 0-63 inches of silty clay. The parent material is alluvium derived from limestone.

Flora

Typical flora that characterize this upland setting include live oak (*Quercus virginiana*), bois d'arc (*Maclura pomifera*), cedar elm (*Ulmus crassifolia*), mesquite (*Prosopis glandulosa*), Ashe juniper (*Juniperus ashei*), buffalo grass (*Buchloe dactyloides*), gramma grasses (*Bouteloua* spp.), prickly pear (*Opuntia lindheimeri*), various mosses, and greenbrier (*Smilax*). Early pioneering settlers to the Edwards Plateau described the area as being vast grasslands in which numerous large cedars (a.k.a., Ashe juniper)

grew on hill and mountain peaks (Tomka and Leffler 1998:32-33). After the colonization of the Edwards Plateau, cedars that were originally confined to hilltops and canyons (where they were not destroyed by natural fires) began to migrate down into the valleys. Cedar is now commonly seen in all areas of the Edwards Plateau region. After the Edwards Plateau was extensively settled and converted into ranchland during the mid nineteenth century, over-grazing by cattle and a lack of a wildfire ecology resulted in an increase in invader species (e.g., mesquite and buffalo grass) that rapidly displaced indigenous flora species (Ellis et al. 1995).

Figure 3. Task 7 Wilson Creek landscape overview

Figure 4. Task 8 Ave D and Mosty Lane landscape overview

Figure 5. Task 8 Nicks Rd and Nicks Rd North landscape overview

CULTURE HISTORY

The culture history of Texas spans approximately 11,500 years. Organized in small bands, prehistoric peoples in central Texas followed a hunter–gatherer subsistence pattern as they navigated the landscape in small bands. Based on observations in the central Texas archeological record during decades of investigations, its prehistory is divided into five distinct periods based on changes through time in subsistence (e.g., hunting and gathering) strategies, artifact assemblages, and contact with Europeans. Distinctive artifact styles such as stone projectile points are used as relative chronological indicators. The prehistoric temporal divisions are Paleoindian, Archaic, Late Prehistoric, Protohistoric, and Historic. For consistency, the following discussions primarily derive from widely accepted culture chronologies offered by Black (1989) and Collins (1995).

PALEOINDIAN PERIOD

The Paleoindian period represents the first known human occupation of the area and dates from 11,500 to 8,800 B.P. During the terminal Pleistocene, the Paleoindian period is noted for its association with high mobility and the hunting of megafauna. However, recent inquiries into Paleoindian subsistence have revealed greater reliance on small-game and plant resources. Research in other parts of the state over the past decade confirms the general age attributed to Paleoindian groups' occupation of Texas. This period is divided into two subperiods: the Early and Late Paleoindian (Collins 1995).

The Early Paleoindian period in central and South Texas dates from approximately 11,500 to 9,500 B.P. (Collins 1995). This subperiod of prehistory is represented by three general cultural traditions defined by subsistence and tool technology: *Clovis*, *Folsom*, and *Plainview*. The first well-documented, large-scale intrusion of people to enter North America is known as the Clovis culture. Named after the famous site on Blackwater Draw near the town of Clovis, New Mexico, the Clovis technological complex is represented archeologically by distinctive fluted stone points and association with extinct Pleistocene mammals including mammoth (*Elephas columbi*), bison *(Bison antiquus*), camel (*Camelops* sp.), and Pleistocene horse (*Equus*).

Toward the end of the Pleistocene, changing climate and possibly human hunting pressure caused the abrupt extinction of the Pleistocene megafauna with the exception of *Bison antiquus*. This change is evident in the faunal assemblages of Folsom and Plainview complex sites including Blackwater Draw (Hester 1972), Lubbock Lake (Johnson and Holliday 1980), and Wilson-Leonard (Collins 1998), and Folsom (Meltzer 2006). Mesic conditions and vast grasslands supported an abundance of the now-extinct form of bison. It appears Folsom and Plainview peoples tracked bison over great distances as evidenced by lithic sourcing and technological organization (Hoffman 1991). The Plainview bison kill/butchering component at the Lubbock Lake Site (41LU1) is radiocarbon dated as being post-Folsom at 9,900 B.P. (Johnson and Holliday 1980). Unfluted lanceolate Paleoindian points similar to *Plainview* from the northern Great Plains (referred to as "*Goshen*") dating to approximately 11,000 B.P. (Frison 1991; Kornfeld 2009) indicate clear chronological affiliation of unfluted points. Recent studies of Paleoindian deposits at the Aubrey site have returned radiocarbon dates of 11,542 ± 111 BP and 11,590 ± 93 BP.

Late Paleoindian sites and associated artifacts are dated from 9,500 B.P. to 8,800 B.P. This subperiod is marked by changes in site frequency and artifact density, with sites being more numerous and containing higher artifact densities. Diagnostic tool types associated with the late Paleoindian subperiod have been recovered at sites across central Texas and include *Scottsbluff*, *Wilson*, *San Patrice*, *Big Sandy*, *St. Marys Hall*, *Barber*, and *Golondrina* (Collins 1995, 1998). Though the *San Patrice* and *Big Sandy* types are more common in the southeastern United States, the presence of these types along the eastern plateau margin represents the western extent of those technological traditions (Patterson 1989).

ARCHAIC PERIOD

The Archaic period, which lasted from 8,800 B.P. to 1,200 B.P., is the longest of the defined cultural periods and comprises two-thirds of central Texas prehistory. This period is divided into three subperiods: Early, Middle, and Late Archaic. Marked changes in the material culture of the Archaic from the Paleoindian period include burned rock middens and ground stone indicative of a shift toward more intensified utilization of local flora and fauna. The majority of the Archaic is marked by a prolonged drought that ended by the Late Archaic subperiod with a change to a more mesic climate (Collins 1995).

The Early Archaic dates from approximately 8,800 to 6,000 B.P. In central Texas, this subperiod is represented by a diagnostic tool tradition consisting primarily of corner-notched, barbed, and split-stem projectile points (i.e., *Gower*, *Uvalde*, and *Martindale*), though vestiges of the previous lanceolate tradition remain in the *Angostura* type. The latter part of the period sees the introduction of basally-notched dart points. The "Early Corner Notched Horizon" (ca. 8,500 to 6,000 B.P.) represents a continuum of corner-notched dart points that include the *Martindale*, *Uvalde*, and *Gower* types listed above, as well as *Baker* and *Bandy* types (Hester 1995:436). Often associated with this earlier horizon in the San Antonio and Guadalupe river basins are gouge-like artifacts referred to as Guadalupe tools. The "Early Basal Notched" horizon (ca. 6,100 to 5,500 B.P.) overlaps the subsequent Middle Archaic in central Texas and consists of dart points with deep basal notches, long distinctive stems, and large barbs, such as *Bell* and *Andice* dart points (Hester 1995:437).

The Middle Archaic subperiod lasted from approximately 6,000 to 4,000 B.P. and in central Texas is represented by numerous diagnostics artifacts, including *Andice, Bell*, *Early Triangular*, *Nolan*, and *Travis*. Middle Archaic sites often contain triangular dart points with stemmed varieties (Collins 1995, 1998). The Middle Archaic coincides with the onset of a xeric climatic interval that has been referred to as the Middle Holocene Altithermal. This climatic interval is marked by extensive erosion and limited alluvial deposition. Erosion destroyed many of the Middle Archaic sites on stream terraces, while frequently surface stability in other locations allowed the accumulation of cultural debris into palimpsests representing centuries or even millennia of repeated occupation (Collins 1995; Holliday 1992).

The Late Archaic subperiod is dated to about 4,000 to 1,200 B.P. and indicates a shift to a more mesic climatic interval and the resumption of aggradation of many stream terraces. Increased distribution and density of Late Archaic sites in the central and south Texas regions may be attributed to population growth resulting from a broader resource base associated with increased precipitation. This period is represented by a wide variety of diagnostic projectile points including *Bulverde*, *Pedernales*, *Marshall*,

Montell, and *Castroville* types during the early Late Archaic, and *Fairland*, *Frio*, *Ensor*, and *Darl* types in the latter part of the period (Collins 1995, 1998; Johnson and Goode 1994).

LATE PREHISTORIC PERIOD

This period begins ca. 1,200 BP and lasts until the Protohistoric Period (approximately. A.D. 1,250). The term Late Prehistoric is commonly used to designate the period following the Late Archaic. A series of distinctive traits marks the shift from the Archaic to the Late Prehistoric period, including the technological shift to the bow and arrow and the introduction of pottery. The period includes two phases: The Austin Phase and the Toyah Phase (Collins 1995).

At the beginning of this period environmental conditions were warm and dry. More mesic conditions appear to accelerate after 1,000 BP. Subsistence practices remain relatively unchanged, especially during the Austin Phase. Projectile point styles associated with the Austin Phase include *Edwards* and *Scallorn* types while in the Toyah Phase, the *Perdiz* projectile point is prevalent (Collins 1995). Most researchers agree the early portion of the Late Prehistoric period was a time of population decrease (Black 1989:32). Radiocarbon data has revealed that a number of burned rock middens in central Texas were utilized throughout the Late Prehistoric.

Beginning rather abruptly at about 650 BP, a shift in technology occurred. This shift is characterized by the introduction of blade technology, the first ceramics in central Texas (bone-tempered plainwares), the appearance of *Perdiz* arrow points, and alternately beveled bifaces (Black 1989:32). Prewitt (1981) suggests this technology entered the region from north-central Texas. Patterson (1988), however, notes the *Perdiz* point was first seen in southeast Texas by about 1,350 BP, and was introduced to the west some 600 to 700 years later.

Ricklis (1994) contends that ceramics became a part of the archeological record in central Texas beginning about A.D. 1,250/1,300. Early ceramics in central Texas are associated with Toyah phase components and referred to as Leon Plain. The earliest dates for Leon Plain are relative and based on associations with "Toyah" assemblages. The Leon Plain ceramic type includes undecorated, bone-tempered bowls, jars, and ollas with oxidized, burnished, or floated exterior surfaces (Ricklis and Collins1994). Although there is a typical set of attributes associated with Leon Plain, there is notable variation within the type (Black 1989; Johnson and Goode 1994).

PROTOHISTORIC

The Protohistoric period encompasses the transitional period from the Late Prehistoric to the Historic period. This transition is poorly documented and is marked by the end of the Toyah Phase, roughly A.D. 1,250/1,300 to 1,600/1,650, and the appearance of Spanish explorers in the area in the early sixteenth century. Following the establishment of a strong Spanish presence in the region in the late 1600s and early 1,700s, sporadic encounters occurred between indigenous populations and Europeans. Archeologically, the transitional period is difficult to discern in the absence of artifacts clearly Spanish in origin, as Protohistoric sites tend to have both Late Prehistoric and Historic artifacts.

PREVIOUS ARCHEOLOGICAL INVESTIGATIONS

B&A conducted a review of records available online from the THC's Texas Archeological Sites Atlas (TASA) to determine the presence of previously recorded sites in or adjacent to the Task 7 and 8 project areas. The online review revealed that no previously recorded sites rest within the proposed project area. However, several previously recorded archeological sites are situated within a 1-mile (1.6 km) radius of the localities associated with Tasks 7 and 8.

The Task 7 portion of the project area is situated within a 1-mile (1.6 km) radius of two previously archeological sites. Site 41KR519 is located 0.49 mile (0.78 km) southeast of the Task 7 project area. It was recorded in 1995 by EH&A. It was described as a prehistoric open campsite. Cultural material observed at 41KR519 included six specimens of lithic debitage, one utilized flake, and a fire cracked rock consisting of a heat spall. Artifacts were observed from deep deposits and the site was described as having SAL/NRHP eligibility potential. In 2005 the State Historic Preservation Office (SHPO) determined that the site's eligibility was undetermined. In 2006 the SHPO determined that the site was not eligible within the project's ROW. Site 41KR518 is located 0.68 mile (1.09 km) southwest of the Task 7 project area. It was recorded in 1995 by EH&A. It was described as a prehistoric lithic procurement area. Cultural material observed at 41KR519 included bifaces, unifaces, debitage, and cores. Artifacts were observed on the ground surface and no subsurface deposits were observed during shovel testing. The site was described as having no SAL/NRHP potential. In 1996 the SHPO determined that the site was not eligible for SAL/NRHP listing.

Archeological survey was conducted south of the Task 7 project area by the Lower Colorado River Authority (LCRA) in 2006. Subsequent to that survey, B&A initiated the original archeological surveys of the Task 7 area in 2011. A historical marker for the Apelt Armadillo Farm commemorates a defunct enterprise which occurred to the southwest.

The Task 8 portion of the project area includes two separate localities. Five sites rest within a 1-mile (1.6 km) radius of the Avenue D and Mosty Lane portion of the Task 8 project area. Site 41KR728 is situated 0.27 mile (0.44 km) to the south. It was recorded in 2013 by B&A and described as a surficial prehistoric lithic scatter. Cultural material observed at 41KR728 included lithic debitage, ground stone, a biface, and burned rock. Artifacts were observed on the ground surface and the site was not recommended for SAL/NRHP listing. Site 41KR725 is located 0.39 mile (0.63 km) southeast of the Task 8 portion of the project area. No site records exist for 41KR725. The SHPO described its SAL/NRHP eligibility as undetermined in 2011. Site 41KR710 is situated 0.95 mile (1.53 km) to the east. It was recorded in 2010 by SWCA. It was described as a prehistoric lithic scatter with subsurface deposits. Cultural material observed at 41KR710 included lithic debitage and a core. The site was not recommended for SAL/NRHP listing. Site 41KR606 is situated 0.59 mile (0.96 km) to the northwest. It was recorded in 2008 by avocational archeologists. It was described as burned rock midden site. Cultural material observed at 41KR606 included FCR, debitage, and projectile points (Langtry, Pedernales, Andice, Marshall, and Bulverde types were reported). Early Archaic, Middle Archaic, and Late Archaic occupations are implied. Further work was recommended. The site was revisited in 2003 by avocational archeologists, and found to be 80% intact. The site was not recommended for SAL/NRHP listing. Site 41KR514 is situated 0.89

mile (1.43 km) to the north. It was recorded in 1995 by EH&A. It was described as a prehistoric lithic procurement area with a historic component represented by a historic house site. Cultural material observed at 41KR514 included a scraper, biface fragment, historic glass, and historic ceramics. The site was not recommended for SAL/NRHP listing.

Four historic markers rest within a 1-mile (1.6 km) radius of the Avenue D and Mosty Lane portion of the Task 8 project area. They include the Reynolds, N.O., House (a residence belonging to a prominent Texas Ranger), the Center Point Cemetery, the Rising Star Lodge No. 429 (a fraternal lodge chartered in 1875), and the Center Point United Methodist Church. The only NRP property within a 1-mile (1.6 km) radius of the Task 8 portion of the project area is the Woolls Building. Archeological survey work was carried out north, east, south, and west of the Avenue D and Mosty Lane portion of the Task 8 project area by B&A in 2011, as well as to the north and south by SWCA in 2011.

Two sites rest within a 1-mile (1.6 km) radius of the Nicks Road and Nicks Road North portion of the Task 8 project area. Site 41KR516 is situated 0.54 mile (0.87 km) to the northeast. It was recorded in 1995 by EH&A. It was described as a prehistoric lithic procurement area. Cultural material observed at 41KR516 included bifaces, unifaces, cores, and lithic debitage. Artifacts were observed from the ground surface and the site was not recommended for SAL/NRHP listing. The site was determined to be ineligible in 1996. Site 41KR517 is located 0.97 mile (1.56 km) northeast of the Nicks Road and Nicks Road North portion of the Task 8 project area. It was recorded in 1995 by EH&A. It was described as an alleged, historic Native American shelter dug into the bedrock of a bluff. Cultural materials observed at 41KR517 are not described, but artifacts were reported present. Avoidance of the site was suggested, but the site was not recommended for SAL/NRHP listing.

Archeological surveys were carried out by LCRA in 2005 north of the Nicks Road and Nicks Road North portion of the Task 8 project area. In 2011, B&A also conducted archeological survey work north, south, east, and west of the Nicks Road and Nicks Road North portion of the Task 8 project area. No known cemeteries or NRHP properties are located within miles of the Nicks Road and Nicks Road North portion of the Task 8 project area.

METHODS

B&A's archeological investigation consisted of a 100 percent pedestrian survey of the Task 7 and 8 localities, the Task 7 project area required the excavation of two backhoe trenches, and the Task 8 project area required approximately 13 shovel test excavations. Investigations adhered to THC survey standards (n.d.), as well as the guidelines of the Council of Texas Archeologists (CTA) (1987), and the Secretary of the Interior's Standards and Guidelines (National Park Service [NPS] 1983).

The Task 7 portion of the project area is situated along Wilson Creek, a natural water source conducive to prehistoric occupation. Furthermore, this locality consists of primarily Oakalla silty clay loams, the same soils observed at nearby previously recorded sites 41KR518 and 41KR519. Since deep alluvial soils in this locality exhibit the potential to demonstrate deep buried deposits, backhoe trenching was conducted on both sides of Wilson Creek in order to quickly and efficiently determine if buried occupation zones and features were present and if so, to determine which soil zones are included in the vertical extent of the cultural deposits. B&A excavated two backhoe trenches along the proposed centerline perpendicular to the waterway. Typically if buried archeological deposits are encountered during trenching, the site boundaries would be established with additional backhoe trenching to define the vertical and horizontal dimensions.

Excavated backhoe trenches were approximately 5 meters (16.4 feet) long, 1.0 meter (3.3 feet) wide, and typically 1.2 meters (4.0 feet) deep and complied with OSHA standards. Following excavations, the archeologists cleaned and examined trench walls to locate any potential *in situ* artifacts, features, and/or soil anomalies in the trench profiles. Stratigraphic units in each trench were recorded and described in detail on a B&A geologic profile form, including a photographic record. Excavations were plotted with hand-held global positioning system (GPS) receivers.

The Avenue D and Mosty Lane portion of Task 8 is situated in close proximity to the Guadalupe River and Verde Creek, likewise the Nicks Road and Nicks Road North portion of Task 8 is situated in close proximity to the Guadalupe River and Bluff Creek. Proximity to these water sources would make these localities attractive to prehistoric hunter gatherers and also subject to flooding and site burial. The Avenue D and Mosty Lane portion of the Task 8 project area received approximately eight shovel test excavations at 30-meter intervals. The Nicks Road and Nicks Road North portion of the Task 8 project area received approximately five shovel test excavations at 30-meter intervals.

Shovel tests typically measure 30 centimeters (cm) in diameter and range in depth from 75 to 80 cm below surface (cmbs). Shovel tests were excavated in 10-cm increments when possible and all soil was screened through ¼-inch hardware cloth. Relevant information for all shovel tests was recorded on a standardized form.

For the purposes of this survey, an archeological site had to contain a certain number of cultural materials or features older than 50 years within a given area. The definition of a site is: (1) five or more surface artifacts within a 15-m radius (ca. 706.9 m^2), or (2) a single cultural feature, such as a hearth or burned rock midden, observed on the surface or exposed during shovel testing, or (3) a positive shovel test containing at least five total artifacts, or (4) two positive shovel tests located within 30 m of each other.

Solitary artifacts not found in association with other artifacts or features would be considered isolated finds.

Field forms generated during this investigation were completed with pencil on acid-free paper, and GPS coordinates were captured for all shovel test and backhoe excavations to ensure adequate coverage of the project area. No cultural material was collected.

RESULTS OF INVESTIGATIONS

This chapter describes the results of archeological survey work conducted at the Center Point Wastewater Facilities Improvements Project between February 25 and 26, 2015. A synthesis of conditions in the project area followed by brief overview of the investigations of the Task 7 and 8 project areas will follow. B&A archeologists conducted a 100 percent pedestrian survey of both the proposed Task 7 and 8 wastewater lines (**Figures 6**, **7**, and **8**). In addition to one-hundred percent ground surface examination, the Task 7 project area was subject to two backhoe trenches, and the Task 8 project areas received a total of 13 shovel test excavations. A summary of shovel test and backhoe excavations are presented in **Table 1** and **Appendix A**. No subsurface deposits were exposed and no archeological sites were recorded.

TASK 7 SURVEY RESULTS

The northern portion of the Task 7 project area crosses Wilson Creek in a partially wooded area currently used as rangeland**.** This portion of Wilson Creek consists of a well defined channel with fairly vertical banks that flank an east/west oriented bed comprised of medium to large gravels (**Figure 9**). Gravels consisted of primarily rounded to angular limestone with sparse igneous pebbles. Tabular specimens were observed in the creek west of the project area. No chert cobbles were observed during pedestrian survey. The southern portion of the Task 7 waterline consisted of a more thickly vegetated riparian zone with approximately 30% surface visibility. Exposed soils in the banks of Wilson Creek did not exhibit any cultural material and consisted of sterile flood deposits. An examination of the remainder of the Task 7 centerline revealed a slightly eroded ground surface that has been used for cattle grazing. No cultural material was encountered during the examination of the ground surface within the Task 7 project area.

Two backhoe trenches were positioned on each side of Wilson Creek, perpendicular to the channel (see **Figure 6**). Backhoe Trench (BHT) 1 was excavated south of Wilson Creek along a low-lying terrace between a narrow floodplain to the north, and the upland landform to the south. BHT 1 extended approximately 5 m long and 1.59 m deep (see **Appendix A**). The soil profile revealed three soil zones; very dark gray sandy clay loam, overlying brown sandy clay loam, overlying grayish brown sandy loamy clay (**Figure 10)**. The basal soil zone exhibited dense concentrations of cemented calcium carbonates. Clasts cemented by iron-oxide are not uncommon in the geologic formation surrounding the project area, but no redoximorphic attributes were observed in BHT 1. Boundaries between soil zones were clear and smooth, and deposition in this locality is undisturbed by modern development. Task 7 rests along terrace deposits dating to the Pleistocene and Holocene, but soils were sterile of any cultural material. The terminal depth of BHT 1 is believed to be situated just above bedrock as evidenced by intense resistance against the backhoe bucket during excavation.

Figure 6
Backhoe Trenches
Task 7
Wilson Creek Crossing
City of Centerpoint
Kerr County, Texas

Figure 7
Shovel Tests
Task 8
Avenue D to Mosty Lane
City of Centerpoint
Kerr County, Texas

Figure 8
Shovel Tests
Task 8
Nicks Rd and Nicks Rd North
City of Comfort
Kerr County, Texas
Shovel Test (#)
Isolated Find
Project Area
Stream (USGS)
Contour (USGS)
0
150
300
Feet
0
50
100
Meters
Basemap: Image courtesy of USGS Image courtesy of ImagePatch.com
Earthstar Geographics SIO © 2015 Microsoft Corporation
ST9
ST10
ST11
ST12
ST13
Nicks Rd
Nicks Rd North
Jumper Cove
Nicks Cove
Carlisle Rd
27
1500
1480
1460

Figure 9. Task 7 Gravel bed and banks of Wilson Creek

Figure 10. Task 7 BHT 1 west wall

BHT 2 was excavated north of Wilson Creek along an upland terrace landform north of a narrow floodplain that gently slopes south to Wilson Creek (**Figure 11)**. BHT 2 extended approximately 5 m long and 1.50 m deep (see **Appendix A**). The soil profile demonstrated three soil zones; dark grayish brown clay loam, overlying dark yellowish brown clay loam, overlying yellowish brown sandy caliche (**Figure 12)**. The bottommost soil zone demonstrated primarily a caliche hardpan. No redoximorphic attributes or significant pedogenic features were observed in BHT 2. Boundaries between soil zones were clear, and deposition in this locality is undisturbed. Soils within BHT 2 were sterile of any cultural material. The terminal depth of BHT 2 was situated immediately above bedrock as evidenced by intense resistance against the backhoe bucket during excavation.

No cultural material was encountered on during the pedestrian survey or backhoe trenching of the Task 7 portion of the project area.

TASK 8 SURVEY RESULTS

B&A's investigations within the Avenue D and Mosty Lane portion of the Task 8 project area emphasized surface examination and systematically excavated shovel tests (STs) to assess the potential for buried archeological materials. The landscape is currently used as a pasture and consists of a cleared, open upland (**Figure 13)**. During the ground surface examination of the terrain, a highly eroded surface with 15% visibility was observed. In addition to pasture-use, plowing, and vegetation clearing, the landscape has also been subject to numerous brush burning episodes as is evidenced by several recent burn piles (see **Figure 13).** No cultural material was encountered on the ground surface.

Shovel testing was conducted at equidistant intervals along the proposed Avenue D and Mosty Lane centerline to complement the pedestrian survey (see **Figure 7**). A total of eight STs (nos. 1 through 8) were excavated at 30-m intervals in portions of landscape within the project area that did not exhibit signs of ground disturbance. Yellowish brown, reddish brown, and dark brown clay loams and clay were encountered over intact subsoil (**Figure 14**) (**Table 1**). Upper soils were disturbed and in some cases subject to modern burning episodes. No buried archeological material was discovered in any of these eight STs.

Table 1. Shovel Test Descriptions

Shovel Test	Level (cmbs)*	Soil Color/Texture	Cultural Material	Comments	Site
1	0 to 60	Reddish brown clay loam	Sterile	Moist, firm, sticky with gravels	
2	0 to 18	Brown clay loam	Sterile	Common gravels	
	18 to 35	Reddish brown clay loam	Sterile	Firm and sticky subsoil	
3	0 to 16	Brown clay loam	Sterile		
	16 to 45	Yellowish brown clay loam	Sterile	Shallow subsoil	
4	0 to 40	Dark brown silty clay	Sterile	Fist sized gravels at lower depths with pea sized gravel throughout	

Table 1. Shovel Test Descriptions

Shovel Test	Level (cmbs)*	Soil Color/Texture	Cultural Material	Comments	Site
5	0 to 25	Dark brown silty clay	Sterile	Moist, firm, sticky with abundant gravels	
	25 to 30	Reddish brown silty clay	Sterile	80% gravels	
6	0 to 33	Reddish brown clay loam	Sterile	Moist, firm, sticky	
	33 to 40	Reddish brown clay	Sterile	Decayed bedrock fragments	
7	0 to 52	Dark brown clay loam	Sterile	Some burned rock from nearby brush burning events	
8	0 to 50	Dark brown clay loam	Sterile	Moist, firm, sticky	
9	0 to 55	Very dark grayish brown clay loam	Sterile	Highly eroded plow-zone	
10	0 to 49	Very dark grayish brown clay loam	Sterile	Highly eroded plow-zone	
11	0 to 55	Very dark grayish brown clay loam	Sterile	Highly eroded plow-zone and low quantity of gravels	
12	0 to 49	Very dark grayish brown clay loam	Sterile	Highly eroded plow-zone	
13	0 to 53	Very dark grayish brown clay loam	Sterile	Highly eroded plow-zone, adjacent to a goat-pen disturbed by earthmoving episodes	

* Centimeters Below Ground Surface (Shovel Tests were excavated in 10-centimeter levels)

B&A's investigations within the Nicks Road portion of the Task 8 project area emphasized surface examination and systematically excavated STs to assess the potential for buried archeological materials. The terrain consists of a previously cleared and flat upland. The landscape south of the proposed waterline is currently used as a pasture, and has been subject to earth moving, dumping, and various other surface disturbances, while the landscape north of the waterline is used in a residential capacity, subject to previous waterline placement and dumping (**Figure 15).**

During the ground surface examination of the terrain, a highly eroded surface with 25% visibility was observed. One isolated find, consisting of a utilized flake manufactured from fine-grained gray chert, was encountered during the surface examination (**Figure 16)**. The expedient prehistoric tool exhibited some use-wear along its edges. Given the intensive use of the landscape for livestock grazing and the adjacent waterline disturbance, the isolated find was not observed in a primary context. No other artifacts were observed on the landscape.

In addition to goat grazing in the south, the landscape has also been subject to previous waterline development, therefore, subsurface investigations were focused immediately south of the existing

waterline. Shovel testing was conducted at equidistant intervals along the proposed Nicks Road centerline to complement the pedestrian survey (see **Figure 8**). A total of five STs (nos. 1 through 5) were excavated at 30-m intervals. The western extremity of the proposed waterline exhibited landscape depressions indicating some previous earth moving and was not shovel tested. The locality immediately adjacent to the location of the isolated find was also shovel tested. Very dark grayish brown clay loam was encountered all the way to subsoil (see **Table 1**). Upper soils were highly disturbed. No buried archeological material was discovered in any of these five STs.

Figure 11. Task 7 Transition between narrow floodplain adjacent to Wilson Creek and upland terrace

Figure 12. Task 7 BHT2 east wall

Figure 13. Brush burning pile on surface of Task 8 Ave D and Mosty Lane project area

Figure 14. Shallow topsoil within Task 8 Ave D and Mosty Lane project area

Figure 15. Disturbed landscape and dumping along western portion of Nicks Rd project area


Figure 16. Isolated Find within Nicks Rd and Nicks Rd North project area

SUMMARY AND RECOMMENDATIONS

During B&A's 2015 archeological survey of the localities associated with Tasks 7 and 8 of the proposed Center Point Wastewater Facilities Improvements Project in Center Point, Kerr County, Texas. B&A archeologists excavated two BHTs and 13 shovel tests across the project area in areas exhibiting the least amount of ground disturbance. No archeological material was discovered in any of the BHTs or STs. Only one isolated find was encountered. The specimen was observed in a disturbed context within the Task 8 portion of the project area. Based on the stratigraphy observed in various cut-backs along Wilson Creek and two backhoe trenches, localities associated with Tasks 7 and 8 of the proposed Center Point Wastewater Facilities Improvements Project exhibit shallow deposits above sterile subsoils above bedrock.

In sum, no significant archeological materials were encountered within localities associated with Tasks 7 and 8 of the proposed Center Point Wastewater Facilities Improvements Project that would exhibit NRHP or SAL eligibility. B&A recommends that the project proceed to completion.

In the event that previously unidentified archeological resources are discovered during construction, work in the immediate vicinity of the area of discovery would cease immediately until the THC is contacted and accidental discovery procedures initiated.

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APPENDIX A

BACKHOE TRENCH DESCRIPTIONS

Backhoe Trench Descriptions

Backhoe Trench 1

Zone	Depth (cm)	Description
Zone I	0–57	Dry slightly compact very dark gray (10YR 3/1) sandy clay loam; blocky structure; very friable; few fine grass, roots; clear and smooth lower boundary; little to no gravels; stratum dips to north toward Wilson Creek; no inclusions or significant bioturbation; no artifacts.
Zone II	57–132	Dry slightly compact firm brown (10YR 4/3) sandy clay loam; blocky structure; no mottles; moderately friable; some calcium carbonate visible as filaments and flecks present; clear and smooth lower boundary; no artifacts.
Zone III	132–159	Dry grayish brown (10YR 5/2) sandy loamy clay; hard; blocky structure; not friable; platy; abundant calcium carbonate visible as filaments and flecks; lower boundary not observed, but situated slightly above bedrock; no artifacts.

Backhoe Trench 2

Zone	Depth (cm)	Description
Zone I	0–46	Dry and slightly compact dark grayish brown (10YR 4/2) clayey loam; blocky structure; friable; diffuse lower boundary; no inclusions; moderate root and insect disturbances; no artifacts.
Zone II	46–99	Dry and very hard dark yellowish brown (10Y 4/4) clayey loam; moderate blocky structure; no mottles; moderately friable; clear and abrupt lower boundary; no artifacts.
Zone III	99–150	Dry, very hard light yellowish brown (10YR 6/4) sandy caliche; blocky structure; lower boundary not observed, but situated directly above bedrock; matrix mostly cemented calcium carbonate (caliche); no artifacts.